We claim:

1. A method of isolating RNA from a biological specimen comprising:

(a) contacting the biological specimen with an admixture of (i) a mono-phasic solution of phenol and guanidine isothiocyanate, and (ii) a lysis buffer under conditions and for a time appropriate to form a homogenate;

(b) admixing the homogenate with a water-immiscible organic solvent under conditions and for a time appropriate to form an aqueous phase and an organic phase;

(c) contacting the aqueous phase with a C_1-C_4 lower alcohol under conditions and for a time to form a precipitated RNA; and

(d) recovering the precipitated RNA.

2. The method of claim 1 wherein said biological specimen is first contacted with a lysis buffer followed by a mono-phasic solution of phenol and guanidine isothiocyanate.

3. The method of claim 1 wherein the RNA isolated is total RNA.

4. The method of claim 3 wherein said biological specimen is a Gram-positive bacterium.

5. The method of claim 1 wherein the biological specimen is a clinical isolate of a microorganism.

6. The method of claim 5 wherein the microorganism is a bacterium, a virus, a fungus, or a combination thereof.

7. The method of claim 6 wherein the biological specimen is obtained from a human, animal, plant or microbe.

8. The method of claim 1 wherein the lysis buffer comprises a chelating agent and a dispersing agent.

9. The method of claim 8 wherein the chelating agent is EDTA, EGTA, or a combination of both.

10. The method of claim 8 wherein the dispersing agent is a detergent.

11. The method of claim 8 wherein the dispersing agent is a surfactant.

12. The method of claim 11 wherein the surfactant is N-lauroylsarcosine, sodium lauryl sulfate or a mixture thereof.

13. The method of claim 1 wherein the water-immiscible organic solvent is chloroform, carbon tetrachloride, or a mixture thereof.

14. The method of claim 1 wherein the C_1-C_4 lower alcohol is ethanol, methanol or isopropyl alcohol.

15. A composition that comprises an admixture of (i) a mono-phasic solution of phenol and guanidine isothiocyanate and (ii) a lysis buffer.

16. A kit comprising at least one vessel that contains (i) a mono-phasic solution of phenol and guanidine isothiocyanate and (ii) a lysis buffer.

17. The kit of claim 16 wherein said (i) a mono-phasic solution of phenol and guanidine isothiocyanate and (ii) a lysis buffer are held in separate vessels.

18. The kit of claim 16 further including instructions for isolating RNA or total RNA from a biological sample.

19. The kit of claim 16 wherein the lysis buffer comprises a chelating agent and a dispersing agent.

20. The kit of claim 19 wherein the chelating agent is EDTA, EGTA or a combination of both EDTA and EGTA.

21. The kit of claim 16 wherein the dispersing agent is a detergent.

22. The kit of claim 16 wherein the dispersing agent is a surfactant.

23. The kit of claim 22 wherein the surfactant is N-lauroylsarcosine, sodium lauryl sulfate or a mixture thereof.